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# Patients' experiences of life review therapy combined with memory specificity training (LRT-MST) targeting cancer patients in palliative care

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## Abstract

**Purpose** Life review therapy combined with memory specificity training (LRT-MST) is effective in cancer patients in palliative care, but the effect size is moderate. The aim of this qualitative study was to obtain more in-depth knowledge on motivation to start with LRT-MST, experiences with LRT-MST, and perceived outcomes of LRT-MST.

**Methods** Semi-structured interviews were conducted with 20 cancer patients in palliative care who participated in a randomized controlled trial investigating the effect of LRT-MST. All interviews were digitally recorded and transcribed verbatim. Data were analyzed by means of thematic analysis independently by two coders and coded into key issues and themes.

**Results** Patients started LRT-MST for intrinsic (e.g., potential benefit for personal well-being) and extrinsic reasons (e.g., potential benefit for future patients). Patients indicated mainly positive experiences with the intervention. They appreciated sharing their memories and regaining memories with a specific focus on retrieving positive memories. Some disliked the fact that negative memories could not be addressed. Most patients perceived positive outcomes of the intervention belonging to the overarching themes “ego-integrity” and “psychological well-being” in the here and now, as well as in the nearby future (including end-of-life).

**Conclusions** LRT-MST is of added value as a psychological intervention in palliative care. This study provided in-depth insight into reasons to start the intervention, and the experiences and outcomes, which are important to further tailor LRT-MST and for development or improvement of other psychological interventions targeting cancer patients in palliative care.

**Keywords** Cancer · Life review therapy · Autobiographical memory · Palliative care · Qualitative research

## Introduction

When people are diagnosed with cancer, this can halt their life. All attention goes to the disease and being ill. Concepts such as past, present, and future suddenly get a whole different meaning. Many incurably ill cancer patients have trouble coping with the disease and suffer from psychological distress, depressive symptoms, or even depression [1]. Previous research showed that depressed mood and depression are associated with difficulties in recollecting specific and positive autobiographical memories [2–4], while these memories can give strength in difficult times.

In a recent randomized controlled trial (RCT), we examined the efficacy of an intervention, “Dear Memories” [5], that focuses on retrieving positive memories among palliative cancer patients [6]. The intervention combines life review therapy (LRT) with memory specificity training (MST). Butler [7] defined life review as “the progressive return to consciousness

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of prior experiences, which can be re-evaluated with the intention of resolving and integrating past conflicts, thereby providing new significance to one's life." A life review intervention aims to integrate positive and negative life events in a coherent life story and into a meaningful whole. This may lead to a greater experience of ego-integrity, which is described as accepting your life cycle as something that had to be, feeling connected to others, and experiencing a sense of wholeness, meaning, and coherence when facing death [6, 8]. LRT is a structured variant of reminiscence (recalling memories from the past) and refers to the use of life review in psychotherapy. An important aspect in LRT is the autobiographical memory, consisting of memories from an individual's life and knowledge about the world [2, 9]. The MST included in LRT-MST aims to improve the recall of specific and positive memories instead of more generic memories [10, 11].

Results of the RCT investigating LRT-MST in cancer patients in palliative care showed that the course of ego-integrity improved significantly over time in the intervention group compared to a control group who received care as usual [6]. However, the effect size in this study was moderate, indicating that not all patients benefitted from the intervention. Therefore, more in-depth information on the experiences of the participants is called for.

The aim of this study was to qualitatively investigate motivation to start LRT-MST, experiences with, and, perceived outcomes of participation in LRT-MST. Results are relevant to further improve LRT-MST and interventions targeting cancer patients in palliative care in general.

## Methods

### Context and study participant selection

The present study was conducted in the context of a RCT on LRT-MST [6]. LRT-MST is an autobiographical memory retrieval practice, focusing on bringing up positive specific events. It consists of four individual sessions focusing on a particular life period: childhood, adolescence, adulthood, and the whole life span [3, 5]. For each period, 14 questions are prepared to prompt specific positive memories (e.g., "Do you remember, as a child, receiving a present which was very special to you?"). For each question, the interviewer tries to get a specific view of the situation by asking for more (detailed) information, thereby training patients in regaining more specific and positive memories. Each session takes approximately 1 h and is led by a trained psychologist. The sessions were recorded on mp3 and copies were offered as a remembrance for the respondents and/or their family members.

In the RCT, patients in palliative care received LRT-MST mainly at their home. Inclusion criteria for participating in the

RCT were age above 18 years, a diagnosis of cancer without curative treatment options, and a prognosis of more than 3 months. Participants were excluded if they had psychotic behavior, a severe cognitive dysfunction, a severe impairment in oral communication, and insufficient mastery of the Dutch language to complete questionnaires and to answer the questions of the life review interviews. In total, 107 cancer patients in palliative care were randomly assigned to the intervention ( $n = 54$ ) or a waiting-list control group ( $n = 53$ ), of whom 38 patients in the intervention group and 4 patients in the waiting-list control group completed LRT-MST ( $n = 42$ ). Of these 42 patients who completed LRT-MST, 18 had already died and three patients were too ill at the moment of purposive recruitment in the present study. Patients were approached by telephone with information about the current follow-up study and all 21 eligible patients agreed to participate. Unfortunately, one of the interviews recorded was deleted accidentally, leaving a study sample of 20 patients. Although we made use of total population sampling, data saturation was reached since no new information related to our research questions was gained during the last interviews. The study was approved by the Medical Ethical Committee of VU University Medical Center in Amsterdam and registered in the Netherlands Trial Register (NTR2256). All patients provided written informed consent. Patients' characteristics are shown in Table 1.

**Table 1** Characteristics of participants

	<i>n</i>	%
Gender		
Male	10	50
Female	10	50
Age		
Mean (SD)	65.6 (8.7)	
Range	48–85	
Marital status		
Married	13	65
Not married	7	35
Children		
Yes	18	90
No	2	10
Level of education		
Academic education	3	15
Higher education	6	30
Secondary education	7	35
Primary education	3	15
None	1	5
Tumor type		
Lung cancer	10	50
Hematological cancer	5	25
Other	5	25

**Table 2** Interview topics

Themes	Key questions
Motives to start	- Why did you decide to participate? - What were your expectations?
Experiences	- How did you experience participation? - How did you experience it to actively focus on your own life story?
Perceived outcomes	- Did participation help you? In which way? - Did participation lead to changes in the way that you look back on your own life?

## Instrument and procedure

The semi-structured interview scheme consisted of three themes (motivation, experiences, and perceived outcomes) with associated questions (Table 2). Topics and questions were derived from clinical experience and from previous studies [5, 12]. The single interviews with the patients were conducted in a home setting, by a trained female researcher (MP) with a psychological background. Interviews were digitally recorded, transcribed verbatim, and lasted approximately 60–75 min. Field notes were made when relevant (e.g., Patient is difficult to understand, because of speech problems).

## Data analysis

Transcripts were independently coded by means of thematic analysis by two coders (GK, MP) using Atlas.ti 7. Both coders read all transcripts. Motivation to start LRT-MST and citations about experiences with and perceived outcomes of partaking were selected and coded into key issues and themes. After every three transcripts coded, findings were discussed and differences resolved until consensus was reached. The coders together created a coding framework. In case of disagreement, a third coder (CvU) was consulted. The literature was revisited to seek conceptual tools that could be used to categorize the key issues and themes. A single coder (GK) examined the raw data again to ensure that all data were present in the coding.

For this paper, quotes were translated from Dutch into English and anonymized.

We followed consolidated criteria for reporting qualitative research (COREQ) guidelines in reporting this study [13].

## Results

### Motivation to start LRT-MST

Patients noted both intrinsic and extrinsic motives to start LRT-MST (Table 3). An intrinsic reason mentioned was the potential benefit for personal well-being. Some considered the intervention as an alternative for emotional support as provided by for example a psychologist or support group. A few indicated to especially appreciate the positive focus of LRT-MST.

It intrigued me, that it was the opposite of the psychologist who assumes the negative.

Another intrinsic motive to start was being interested in reviewing one's life story. Some remarked that they already knew of "life review" and wanted to try this themselves. An attractive element considered by some concerned leaving a legacy (in the form of audio recordings). One participant specified that he hoped to receive some form of guidance in end-

**Table 3** Motivation and considerations towards starting LRT-MST

Key issues	Themes
Intrinsic motives	
Potential benefit for personal well-being	- Hope for guidance in end-of-life care
Participation because of positive focus of intervention	
Interest in reviewing life story	- Wish to leave a legacy
Extrinsic motives	
Participation because of treatment in academic hospital	
Potential benefit for future patients	
Considerations to not participate	
Doubts because of fear that hard times would come up	
Inner circle having doubts about participation	
Skeptical towards psychologist/alpha sciences	

of-life. Others indicated to start because of extrinsic reasons: doing something in return for being treated in a university hospital or because of a potential benefit for future patients.

Some mentioned that they did not have clear reasons or even had some considerations, like the risk that “difficult times from the past” would arise.

## Experiences with participation in LRT-MST

The majority indicated that they enjoyed reviewing their lives (Table 4).

### Sharing memories

Most patients mentioned to appreciate the opportunity to talk about themselves and their memories. Several described that sharing memories is not an everyday occurrence. They indicated to lack family members to talk with about the past and that sharing memories is not something you normally do.

I enjoyed doing it, telling your life story to someone else, a perfect stranger, for a change. [...] You do not sit down with your own wife thinking ‘now I am going to tell all of this’.

Others mentioned it to be an advantage to talk with a stranger about topics they perceived as too sensitive to discuss with their own family. Several mentioned that they did not want to bother their own inner circle.

One patient mentioned that he was not totally open.

From day one I said: ‘I will never tell the truth.’ [...] I mean, there are certain things you don’t tell. [...] I didn’t make up anything, but I skipped certain things.

### Regaining memories

Most patients noted that they regained more memories than expected and that their ability to remember details increased because of the focus on specific life phases and questions posed.

All sorts of things came to the surface that I really had forgotten. [...] His [the interviewer] questioning did this.

Patients indicated that before partaking they did not think about the past or they thought they had forgotten certain life events.

Some noted that in between the sessions they were thinking about the specific life phase that was discussed in the previous session or delved into the life phase that was planned. They mentioned that they sometimes relived the session and could even remember more.

What else do I remember from those days? Well, I think that in hindsight I could have told another twenty stories at least, so it does bring back things too.

A few patients noticed that they also regained some unresolved or unhandled memories.

**Table 4** Experiences with participation in LRT-MST

Key issues	Themes
Sharing memories	- Experiences of talking about self
Regaining memories	- Regaining more memories than expected
	- Ability to remember details
	- Regaining underexposed memories
	- Active elaboration on specific life phase (between interviews)
	- Relived memories
	- Regaining unresolved memories
Focusing on the positive side of your life	- Enhanced awareness of (lack of) positive moments in life story
	- (Unavoidable) recall of negative memories
Feeling acknowledged by...	- A specific intervention for advanced cancer patients
	- The psychologist
	- Opportunity to participate in home setting
	- Obtaining a CD with their life story
Being distracted from medical situation	

I had not expected that it would bring back unresolved things too. [...] Yes, maybe a little, but not as violently. That was the drawback for me: the good things surfaced, but the sad things too.

### Focusing on the positive side of your life

Most patients appreciated to retrieve positive memories only. Several experienced an enhanced awareness of positive moments, while some noticed only few positive moments.

Patients mentioned that despite the positive focus, negative memories were recalled anyhow. Some felt the urge to also discuss these.

When you tell your life's story, you also want [...] to get the bad things off your chest, [...] your experiences. So that was a bit of a drawback, really.

Another patient explained that he was disappointed to not be able to share negative events at first, but that he learnt how to master this.

### Feeling acknowledged

Some patients mentioned that they felt acknowledged by an option focusing on patients in palliative care, because of a lack of options for them. The majority felt appreciated by the psychologist who interviewed them.

Most felt that their circumstances were acknowledged by offering the opportunity to participate at home. They lacked the energy to participate elsewhere, already had much travel expenses for hospital visits or experienced it as more comfortable.

Finally, several considered it of value to receive the audio recordings.

It would of course be really nice for me to listen to this once again, because it has brought me so much positive energy. And I think: it is beautiful, isn't it, to conclude your life by going through your own history one more time. That is such a gift.

### Provides distraction from the medical situation

Patients also mentioned that the intervention distracted from their medical situation.

Uhm, well, it's more like this, it's already a very lonely situation anyway, because in fact everything goes on, except your life, and you just can't go anywhere [for

help]. And I liked this [intervention] very much, because I don't have to talk about the disease, and I do think it was uplifting and positive. It just gives you energy and that is exactly what you need.

## Outcomes of participating in LRT-MST

Most patients perceived several positive outcomes, belonging to two overarching themes “Ego-integrity” and “Psychological well-being” (Table 5). A few mentioned that they did not experience any outcomes of partaking. They already felt “positive” or found it difficult to distinguish between outcomes of having an incurable disease versus outcomes of partaking. One patient indicated that partaking had brought him nothing.

### Ego-integrity

**Re-evaluation of life** The majority mentioned that thinking and talking about live events incited them to re-evaluate their lives, by which they obtained increased insight in their own life story.

I never looked back, I had no rear-view mirror in my mind, and so now I have one. In that sense it has been useful to me, then you are looking at it all from another perspective.

**Achieved ego-integrity** Several noted to recognize themes, a structure, patterns or a “golden tread” in their lives:

It aren't pieces, it is a connected chain; it all goes together. The past is part of the present and will also have to do with your future. The piece of future you still have.

Some indicated that they were able to recognize positive experiences in negative life periods or described that thinking and talking about the past helped them to process and accept their life including negative events. Some also mentioned that they could make more sense of their life story and recognized their own personal growth.

I have experienced far more strength in it, and continuity too; that in essence it were basically the same problems, which I apparently had to face in this life. And yes, it comes with ups and downs, but that is okay. For you do undergo a development in it and you do grow in it. [...] I have now had a far better look at this growth, and this



**Table 5** Perceived outcomes of participation in LRT-MST

Key issues	Themes
Overarching theme “Ego-integrity”	
(Re-)evaluation of life	- Obtained insight in life story
Achieved ego-integrity	- Recognition of a “golden thread” in life
	- Recognition of positive experiences in negative life periods
	- Processing and acceptance of negative life events
	- Make more sense of life story
	- Recognition of personal growth
	- Acceleration of maturation process
	- Increased acceptance of others (milder)
	- Acceptance of disease
	- Seeing life as a whole
	- Confidence in end-of-life
	- Solved past conflicts (reconciliation)
Overarching theme “Psychological well-being”	
Finding meaning in the now	- Awareness of living in the now
	- Leaving the past behind
	- Awareness that life is worth living
	- Feeling prepared for the future
	- Able to focus of the positive aspects of life
	- Gratefulness
Mastery	- Empowerment
	- Resilience
Improved coping	
Self-acceptance and self-appreciation	
(Changed) mood	- Ability to recall memories to improve mood
Increased social life	- Social interaction
	- Restarting activities

growth must also help you to take that final short stretch. That is the insight it has clearly given me.

Some patients indicated they became more accepting and understanding towards others. Others mentioned they started the conversation about or even resolved disagreements or conflicts from the past.

Some patients indicated that as a result of partaking they experienced “feelings of increased acceptance of the disease”. They explained that they were more “at peace” with the situation.

At first, I was really only thinking about, ehm, with every plant I planted in the garden, I thought: I will not even see that one grow, I don’t even know if it will make through winter. Well, in everything: last Christmas, last birthdays, all last things. (...) I have now let it go. We will wait and see.

One patient specifically mentioned that he was fixated on the disease since diagnosis. Due to LRT-MST, he started seeing life as a whole again.

The moment that you hear that you are ill, you focus on your illness. You do not attach, involve other things in that. ‘Dear Memories’ did that. You start looking at the bigger picture. Before then, I was only focused on how can I stay here for as long as possible, in the world below the moon?

One participant said to have gained more confidence to face their end-of-life.

Then the last stage arrives in which new things will also happen again in your life, but in which you will have also have developed unbelievably great strength and skills to face it. So, it has shifted from a kind of fear to

a kind of curiosity and a kind of, all in all, self-confidence.

### Psychological well-being

**Finding meaning in the now** Patients mentioned to leave the past behind or to be more aware of living in the now. They noted that their lives are still worthwhile and explained that they felt boosted and encouraged not to give up.

Some said that they were able to focus on the positive aspects more and felt glad to be alive.

I am still here, and that is utterly wonderful. And Dear Memories, yes, that only proves that there are still a lot of wonderful things. So if you can think and talk of nice things in the past, those are now still happening too.

Others described to feel better prepared for the future.

To focus on the present and also – and then – when it comes to that ‘Dear Memories’ I have the idea that [...] you can go into the future more complete, better, more positive, so to speak.

Several patients expressed an increased sense of gratefulness. They noted to be more aware of the good that life has offered, like a good upbringing, lovely people, opportunities to experience and learn.

**Mastery** Some patients noted that partaking in the intervention led to a feeling of improved empowerment and that they were more resilient.

It really gave me the feeling of ‘okay, put it on my plate, I can handle it.’ Because of course you have already lived through a number of these situations. They may have looked differently, but in essence it were the same problems.

**Improved coping** Several patients mentioned that partaking helped them to improve their coping skills and as result they “can put daily events into perspective”, “have learnt what matters in life” and “reflect less.”

Also a bit like, God, things run as they run. [...] Well, that I do not get so excited about things anymore.

Politics too, for instance, we can make a fuss about it or we don’t.

**Self-acceptance and self-appreciation** Patients described that due to partaking in the intervention they redeemed more self-acceptance.

Yes, let me say, in everything that life offers you, you suddenly see yourself standing there with your own experiences. And that gives you such an unbelievable amount of strength, insight and certainty, but also a kind of joy and pleasure, this continually, like ‘I am who I am and I am becoming more me by the day’. And I am allowed to.

Others described that the intervention had an influence on their self-appreciation that they became more aware of achievements and felt proud.

There are also moments when you suddenly think like ‘well, I haven’t done too bad’ or ‘oh, not too bad that it happened this way’. And yes, that always strengthens you in your self-appreciation for, hey, I am also a type that needs pats on the back and this method makes you pat yourself on the back.

On the contrary, one patient mentioned that he felt that his self-appreciation slightly decreased, because of being confronted with his negative sides and failures.

**(Changed) mood** Some patients mentioned that partaking in the intervention enhanced their mood and that they learned to recall positive memories to improve their mood.

By bringing back those memories of the past, or situations that were positive or that made you happy in the past, that you can recall them and think: ‘wow, that was fun!’ and that can put you in a more positive mood for a while.

In contrary, one patient described that partaking had a negative influence on her mood.

That, really, the thoughts about life [...] Like: I do not want to hide from it, but I do not want to dive into it either. That combination a bit, it is just enough as it is. Well, I have to say I think the sadness, that this surprised me. [...] Yes, it became a bit harder.



**Increased social life** Several patients mentioned that their social interaction increased.

Because I have now started to think about things in a friendlier way, you do become somewhat more outgoing, somewhat more social, at least, that is how I translate it. And I enjoy having people around me again.

Others indicated that increased social interaction resulted from sharing and retrieving memories with others. One patient noted that because of retrieving memories he was encouraged to undertake activities in the present.

That you suddenly think like, yes, we did things in the past, we went out for dinner more often, and we should actually do that again more often.

## Discussion

In this study, we qualitatively explored motivation to start, experiences with and the perceived outcomes of participation in LRT-MST among cancer patients in the palliative phase. Patients started LRT-MST for both intrinsic reasons and for extrinsic reasons. Some indicated to be motivated to start because of the positive focus. This preference fits in with a new movement within psychology: positive psychology. While psychotherapy traditionally addresses psychological disorders, positive psychology aims to focus on the positive features that make life worth living such as hope, optimism, happiness, and well-being [14, 15].

Patients indicated mainly positive experiences with LRT-MST. They enjoyed sharing memories and most noted that they regained more memories than expected and that their ability to remember details and underexposed memories increased. A negative experience with LRT-MST mentioned by some concerned the upbringing of and limited time for sharing negative emotions and events.

The contrast between the results of the RCT on LRT-MST (showing no clear effect ( $p = .070$ )) on improving autobiographical memory as measured by the Autobiographical Memory Test (AMT) before and after the intervention [6], and the experiences and outcomes as reported by the patients (improved and more detailed memories) call for further research into the assessment and working mechanisms of MST. Also, for clinical practice purposes, we suggest to inform future participants of LRT-MST that “negative emotions” can also come up and may need to be addressed.

Various perceived outcomes reported by patients could be conceptualized as part of achieving “ego-integrity,”

accepting your life cycle as something that had to be, feeling connected to others, and experiencing a sense of wholeness, meaning, and coherence when facing death. Patients noted that they obtained more insight in their life stories due to re-evaluation of their lives and recognized things they were not aware of before (“a golden thread”) and more acceptance of negative life events. These findings support the beneficial effect on ego-integrity, the primary outcome of the RCT on LRT-MST [6]. Other perceived outcomes belonged to the overarching theme of improved “Psychological well-being.” Patients expected to re-use successful coping strategies from the past, since partaking in LRT-MST provided them with the insight into efficacy of these strategies in earlier life events. In LRT-MST, this outcome is aimed for by striving to recall memories involving a successful adaptation [3, 5, 15, 16].

Despite the emphasis on perceived outcomes on positive mental health and flourishing, some patients perceived negative outcomes such as a negative influence on mood. This mixture of positive and negative reported outcomes may explain why the results in the RCT did not show effect on psychological distress, anxiety, and depression and health-related quality of life. Also, some patients noted that they already felt positive at the start of the intervention, which implies that the intervention is not beneficial for all patients in palliative care. Future research should disentangle which patients most likely will benefit from LRT-MST.

A face-to-face intervention in a home setting as LRT-MST proved to have value in this group of palliative cancer patients, but is relatively costly compared to interventions provided in a care setting. A cost-effectiveness study is warranted. Also, alternative formats can be investigated, like an online-guided self-help version of LRT-MST or conduction the interviews via telephone or video-conference [17].

A limitation of this study is that the time after participation in LRT-MST differed among patients. Patients, who had participated more recently, are expected to have recalled more detailed experiences of partaking.

Also, only half of the patients who enrolled in LRT-MST participated in the current study. The main reasons for not participating were that patients were too sick or already deceased at time of the present study, which may have induced bias: it may be that patients who were the sickest at time of LRT-MST experienced the intervention differently from those who survived longer.

LRT-MST is of added value as a psychological intervention in palliative care. This study provided in-depth insight into reasons to start the intervention, and the experiences and outcomes, which are important to further tailor LRT-MST and for development or improvement of other psychological interventions targeting cancer patients in palliative care.

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## Compliance with ethical standards

The authors have full control of all primary data and agree to allow Supportive Care in Cancer to review the data if requested.

**Ethical approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

**Conflict of interest** The authors declare that they have no competing interests.

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